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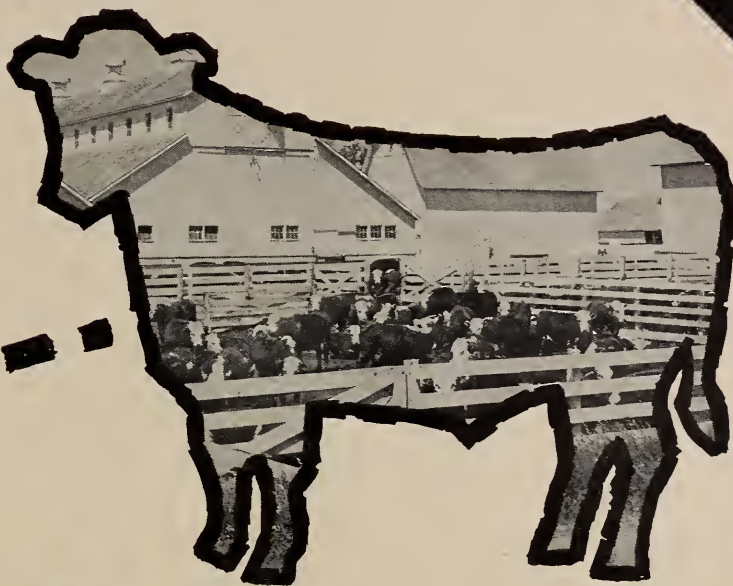
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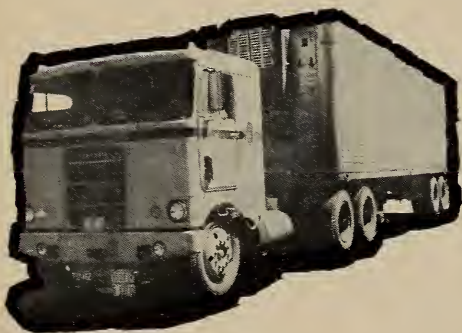
marketing

APRIL 1964

SPECIAL CONSUMER ISSUE



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From Farm
to You

Contents

April 1964

How AMS Serves You	3
Food Grades—A Guide to Shoppers	4
Mandatory Poultry Inspection After Five Years	6
Your Child's Food for Learning	8
Better Food at Better Prices	10
Plentiful Foods for You	13
Instruments—Consumer's Best Friend	14
The Consumer's Role in Milk Marketing	16

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Cover Page

It takes a heap of marketing to make a steer a steak. There is the buying and selling, the assembling, transporting, processing, grading, packaging and storing—all of which are done in the marketing channels to get steaks and other food and fiber to you whenever, wherever and however you want them. Administering programs serving this huge marketing system, which is twice as big a business as the production phase, is the responsibility of AMS.

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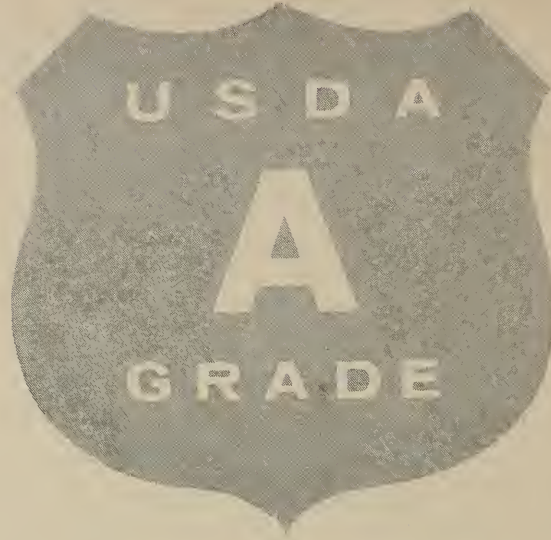


How AMS Serves You

If you are a typical consumer, you probably think of the Agricultural Marketing Service of the U. S. Department of Agriculture as a Federal agency devoted to serving the farmer exclusively. The truth is that AMS serves all American consumers. Exactly how much, was pointed out in a recently issued USDA publication called "Services for You from USDA's Agricultural Marketing Service" (PA-570), which says in part: "Every day of your life—every meal you eat—you depend on marketing. Without marketing, your steak would still be a steer in the feedlot—your lettuce would still be in the field. Marketing is what gets your food to the supermarket shelf—takes it from the millions of farms scattered across the Nation—transforms it into frozen orange juice, bread, bacon, and the thousands of other products you have come to rely on—stores it—ships it—buys it and sells it—and gets it to YOU, regularly, dependably, and safely for your 1,095 meals each year."

It is not simply by chance that today you spend less than 19 percent of your income for food while people in other highly developed countries spend 30 to 40 percent. Part of the reason is that AMS provides the services, regulation, and research needed to modernize, streamline, and grease the wheels of the whole, vast marketing mechanism—to keep it moving, quickly, efficiently, and with the least waste.

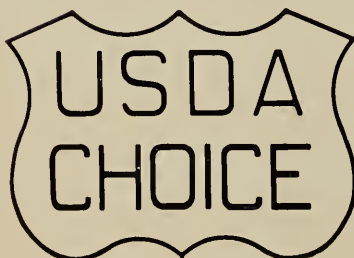
To help you get the quality you pay for in food-shopping, AMS provides grades for many foods—like U.S. Grade AA butter and eggs, U. S. Choice beef, U. S. Grade A chickens and turkeys. To help assure you of wholesome, clean food, AMS inspects much of it, including all poultry processed in plants dealing across State lines, and that is most plants. To help prevent misrepresentation of food quality or weight and to help guard against unfair trade practices that may obstruct delivery of your food, AMS administers regulatory laws. To help keep your food costs down, AMS provides research to find better ways to measure and maintain food quality, to control insects, to improve food packaging, transportation, and distribution centers. To protect your child's health, AMS administers school lunches. Should you become needy or fall victim to natural disasters such as floods or hurricanes, rest assured that AMS stands ready to help reach you with the Nation's food abundance.



Food Grades - A Guide to Shoppers



BUTTER
CHEDDAR CHEESE



BEEF

WHEN the housewife opens the door to her food market, she comes face to face with a dilemma.

As she does her shopping, she's going to be called on repeatedly to make "great decisions" about what to buy—decisions that are vital both to how wisely she spends her family's food budget, and how well she feeds her family.

Many a housewife candidly admits her concern, as she approaches these decisions. She is baffled by the intricacies of which item to choose, how to get best value from the abundance of items offered. Younger housewives, especially, new to the business of food shopping, feel the need of a helping hand, and ask about services available to help them.

A valuable food-shopping guide is available in the long-standing grading service of the U. S. Department of Agriculture. Many stores offer this service to their customers on many foods—on the foods that make up the big bulk of what the housewife has to shop for, what she spends most money on.

In all the principal departments of her food store—meat, poultry, eggs, dairy products, fresh and processed fruits and vegetables—the food shopper can take advantage of the guidance available from Federal and Federal-State graders, who work behind the scenes in marketing.

It's at the meat counter, for example,

that most housewives feel the need of a knowledgeable friend. Meat is the biggest single item in the food bill of most families. It's also the most difficult food to select. And, since it's the central part of the meal, it holds the greatest potential for trouble, if it's not good. There's no cooking disaster to compare with having special company come—and then have the roast you selected turn out to be tough, or tasteless, or both.

Meat graders of the Agricultural Marketing Service grade much of the country's meat, to help shoppers make their decision. Federally graded meat is easy to identify. It bears a grade stamp consisting of a shield enclosing the letters "USDA" and the appropriate grade name. Of the top three grades—Prime, Choice, and Good, in that order—the USDA Choice grade will most often be found in the retail meat counter. You'll find the grade mark applied by a "roller stamp" which leaves a ribbon-like imprint of the grade name, so the name will appear on the outside covering of practically every retail cut. The grade stamp is applied with a harmless purple dye.

Shoppers can request USDA-graded beef, veal, calf, lamb, yearling mutton, and mutton. Although there are Federal grades for pork, they are used primarily in wholesale trading by volume-feeding institutions, rather than by retailers.

Note that USDA grades for meat,

as for other foods, are a guide to help you select the quality you like best. They offer you a measure of quality. Many retailers offer only one particular grade of meat, but if your market offers more than one you can select the grade best suited to your budget and the particular occasion. That helps assure you satisfaction—and helps you save money, by buying a less expensive quality when it will serve your purpose just as well.

If our food shopper is interested in poultry, she'll again have available the help of official graders, who've examined the birds and identified them with their respective grade. The mark to look for is the USDA shield, and the letters USDA Grade A, B, or C which indicate quality. You'll find the grade marks on all kinds of poultry, including chickens, turkeys, ducks, geese, guineas and squabs.

Grading of eggs has become widespread—because of the importance of getting quality suited to needs. The shield is the mark of Federal or Federal-State grading and the egg grades are Fresh Fancy Quality or Grade AA, A and B. Officially graded eggs are also marked as to their size: Jumbo, Extra Large, Large, Medium, Small, and Peewee. The grade and size information helps you get the quality and size you want and which will give you the most for your money.

At the dairy counter, you'll find grading available on butter again marked by the U.S. shield and the grade marks AA, A, B, etc.

The consumer's growing interest in the grading program has resulted in some stores now offering U. S. Grade AA Cheddar cheese. Cottage cheese whose quality has been checked and found satisfactory carries a shield reading "Quality Approved." Some processed cheese and cheese foods, although not graded, are processed under Federal inspection, and are marked with the official inspection shield.

With increased popularity of nonfat dry milk, grading has become more widely used on it—and you'll find it marked with the shield of U.S. Extra Grade or U.S. Standard Grade.

Next, the produce department—where most of the fruits and vegetables you'll find have been packed and

sold on the wholesale market on the basis of U.S. grades. Sometimes these wholesale grades are carried through to retail merchandising. Generally, the grades are numerical—U. S. No. 1, U. S. No. 2, etc. Sometimes these grades are carried over to the consumer, when produce is sold in small consumer-sized packages. A few markets offer consumer grades on a few items of produce—using alphabetical grades, U.S. Grade A, B, etc.

If frozen foods are on your shopping list, you'll often find fruits and vegetables offered by grade. Some canned fruits and vegetables also are graded—as are dried fruits. In some cases, processors employ USDA to keep their processing line under continuous inspection. They usually show this fact on their label—with a shield reading "Packed Under Continuous Inspection of the U. S. Department of Agriculture"—in addition to the grade mark.

In the grocery department of your store, you'll only rarely find USDA grades on dry edible beans, peas, and lentils, although the U.S. standards are widely used by the trade. You'll sometimes find Federal grades on packages of both milled and brown rice—usually the grades U.S. No. 1 and 2.

A typical food shopper, then, is able to make her selections to fill her shopping basket with the behind-the-scenes help of the Government grader on most items on her food list—or, at least, the most important items.

As a result, Federal and Federal-State grading is being widely utilized by consumers. Meat provides a good example. In 1963, the volume of Federally-graded meat sold at retail increased nearly 11.5 percent over the previous year. In all, USDA's 430 meat graders examined and stamped a record 9.2 billion pounds of meat for consumers and volume-buyers—the largest annual peacetime total in the 37-year history of USDA meat grading.

Additional information on USDA grades is available in a publication entitled, "Shopper's Guide to U.S. Grades for Food" (Home and Garden Bulletin No. 58). For single free copies, send a postcard to the Office of Information, U. S. Department of Agriculture, Washington, D. C. 20250.



COTTAGE CHEESE
PROCESS CHEESE
CULTURED SOUR CREAM

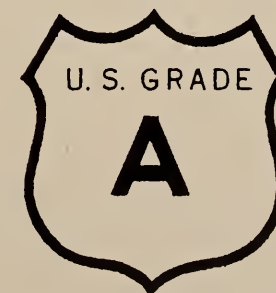


EGGS



← BLUE
← WHITE
← RED

PROCESSED FRUITS
AND VEGETABLES



FRESH FRUITS
AND VEGETABLES

Mandatory Poultry Inspection After Five Years

A LITTLE over five years have now passed since Federal inspection of poultry for wholesomeness became mandatory in poultry processing plants doing business in interstate commerce.

Everyone has learned much during this time. The grower knows how to produce healthier birds. The processor knows more about why certain birds cannot be passed by the inspector. The inspector knows more about the grower's and the processor's problems. The retailer knows that poultry is an excellent item to feature in order to draw customers. The consumer knows that inspected poultry is a fine food which is safe and good to eat.

The official circular inspection mark is the consumer's assurance of wholesomeness. The consumer has responded by continuing to buy more and more poultry.

The poultry producer is producing better birds today as a result of the Federal inspection by USDA's Agricultural Marketing Service. When the service became fully mandatory on Jan. 1, 1959, increased attention was focused on poultry health and on improving management, housing and general environment for poultry, especially broilers.

Checks made by various poultry advisors in a number of producing areas showed a need to encourage better insulation, proper ventilation, and to reduce overcrowding of growing birds. These suggestions were passed on to the growers by Extension Service poultry specialists and county agents, by private laboratories, servicemen, local veterinarians, etc. More States and private firms have set up diagnostic laboratories to better assist producers in their areas.

A number of new flock management research projects which were set up—in California, the Delaware-Maryland-Virginia Peninsula, the Southeast and elsewhere—yielded valuable data supporting these management suggestions, which were passed on to producers through special local and area meetings, and through poultry trade press.



Aided by these tips, producers were able to raise cleaner and healthier flocks, so that there were fewer condemnations and less downgrading at the processing plants. Housing conditions were improved—particularly during the cold, damp winter months—by better ventilation and insulation, and general overall management. This, in turn, benefitted producers by improving efficiency of production, lowering feed conversion rates, and producing higher quality birds. Producers were thus able to receive maximum value for their birds under prevailing market conditions.

Under the mandatory inspection program, as was true under the widespread voluntary program which preceded it, there has been close co-operation between the AMS inspectors, the management of the various processing plants and disease eradication officials. Through a copy of the condemnation certificate, inspectors have been able to provide both processors and growers with strong clues on individual lots of birds which prove to be unsatisfactory for processing for various reasons. Growers can then contact the appropriate experts to assist them to correct their situation.

Although the inspectors themselves cannot go back to individual farms to check flock-raising conditions, they can refer the growers to the proper agencies and local specialists who can give help.

The mandatory poultry inspection program did place some extra burdens on some processors and producers who were not previously affected by Federal inspection, since it required high standards of bird health and condition, as well as of plant construction, layout, sanitation, procedures, equipment, care and maintenance. However it did serve, by the same token, to increase consumer confidence in their product.

Processors are better able now to recognize unhealthy bird and flock conditions on the processing line. They are also benefiting from the mandatory program through the ability of AMS inspectors to show them how to cut down on condemnations caused by persons handling the birds at the plant—through such errors as contamination of the carcass, bruises, oversteaming, etc. Such practices, preventable by proper care, have sometimes been as serious as condemnations caused by disease, but are now continually being reduced to a minimum.

As a double check against the rules being used by AMS inspection personnel in the processing plants to reject or trim carcasses, a national advisory committee on inspection criteria was set up. Members are noted pathologists from State agricultural colleges. Some modifications of procedures have resulted from their suggestions, but in most cases, the existing inspection criteria were endorsed. These criteria had developed from the long-time experience of research poultry pathologists all over the country.

In addition, several poultry health seminars and symposiums have been held jointly by USDA, State agricultural college and poultry associations, to review current research work and management recommendations.

The Inspection Branch of the AMS Poultry Division has long worked closely with poultry processors on plant equipment and layout, so that official inspection would be expedited. The inspection program has been administered so that technological ad-

vances could be made and new equipment installed for greater efficiency as long as it allowed for proper inspection. There has also been close liaison between the poultry inspection staff and other regulatory agencies and State health departments, in trying to reduce the disease problem to the absolute minimum.

The Poultry Division is ever conscious of the need to provide maximum service at minimum cost. While the inspection load has constantly risen, with a continuous rise in production and in population, the inspection staff has been successful in its efforts for economy and efficiency.

Each year since 1960 it has been able to lower the unit cost of inspection while still maintaining its high level of performance. The volume of poultry inspected has risen from 4.5 million pounds per man-year in 1960 to 5.5 million per man-year in 1963, an increase in efficiency of nearly one-fourth.

The principal beneficiary from mandatory poultry inspection, of course, has been the American consumer, who enjoys the most wholesome, most carefully inspected poultry in the world. (Only Canada has a comparable in-

spection program.) The consumer has responded to this privilege by increasing purchases of poultry year by year.

Americans eat more poultry than the people of any other country in the world. In recent year, the people of many other countries have also learned to enjoy and rely on the wholesomeness of American poultry, as our exports have increased dramatically. In 1962, these exports (frozen and canned) were worth \$75.8 million, for 271 million pounds. Last year, due to stiff higher duties and levies by countries in the European Economic Community, the totals dipped to \$56.9 million, for 208.8 million pounds.

The Poultry Products Inspection Act, which became fully effective Jan. 1, 1959, placed upon the Agricultural Marketing Service of USDA four basic responsibilities.

The four broad points of the Act are:

1. To inspect poultry for wholesomeness, so as to determine its suitability for human food.
2. To make sure that poultry is processed in a sanitary manner, in an approved processing plant having the proper facilities for the job.
3. To make sure that poultry is not

adulterated in any manner.

4. To make sure that poultry products are properly and informatively labeled Congress developed greater interest in poultry inspection as per capita consumption of poultry rose from 21.4 pounds in 1948 to 29.6 pounds in 1956.

After World War II, stimulated by military buying specifications, the poultry processing industry quickly moved to convert largely to a ready-to-cook product, in place of the traditional "New York-dressed" bird. This made it possible to provide inspection for wholesomeness at the plant where slaughtering took place.

Impetus for requiring Federal inspection of poultry for wholesomeness came from such source as city and State health departments, State and national veterinarian and public health groups, and other consumer organizations.

In drawing up its legislation, Congress consulted USDA and industry poultry specialists, and held many public hearings to get the views of producers, processors, and other interested parties.

Many poultry processing plants, particularly those holding turkeys, already were using the Federal poultry inspection service on a voluntary basis, and paying a fee for the service, before the service was declared mandatory. The voluntary service was made available back in 1927.

However, the mandatory program sparked a great expansion of the inspection service, and of the volume certified as wholesome. Hundreds of new inspectors were trained, and the new rules and procedures were explained to thousands of employees and management personnel of hundreds of plants.

In 1957 (when the inspection act was passed), 1½ billion pounds of ready-to-cook poultry were certified as wholesome in 324 plants. In 1959 (when mandatory inspection became fully effective), 4¾ billion pounds were certified in 480 plants. By 1963, some 6¼ billion pounds were certified in 496 plants.

Consumption per person in the U.S. has continued to climb, to nearly 38 pounds in 1963. And today, about 84 percent of all poultry meat sold by producers is federally inspected. The circular inspection mark has become familiar to millions of consumers here and abroad as their assurance of wholesomeness. The U.S. Department of Agriculture has been a world pioneer providing this vital service.



Your Child's Food for Learning

THE more than 16 million children enjoying lunch under the National School Lunch Program eat a variety of good-tasting, good-quality foods served in well-balanced meals.

The entire Federal-State program is geared to making maximum use of national, regional and locally abundant foods.

Four-fifths of the food for the National School Lunch Program is purchased by school lunch managers from their local suppliers. The Federal Government contributes approximately one-fifth of the food to encourage the consumption of a variety of nutritious foods, and to help managers serve well-balanced lunches at low cost.

Some of the food purchased and donated by the U. S. Department of Agriculture through its Agricultural Marketing Service comes from supplies of foods on the market that are cur-



Menu



FRIED CHICKEN



GREEN BEANS



CRANBERRY SAUCE



SWEET POTATOES



MILK



HOT BISCUIT



BUTTER



GRAPEFRUIT SECTIONS

rently plentiful. They are purchased specifically to fulfill the needs of schools participating in the program. These foods are purchased by the Government and allocated to the States according to the number of youngsters eating lunches under the programs in the States. Some of these foods are canned applesauce, canned apricots, green beans, frozen ground beef, frozen cut-up chickens, canned corn, canned pork, and canned sweet potatoes.

The other donated foods are acquired through USDA's surplus removal and price support programs. These foods are offered to the States which take as much as they can use constructively. These foods are available to any nonprofit school that has a lunch service, whether it's in the National School Lunch Program or not. Some of these foods are dry beans, bulgur, cheese, corn grits, corn meal, flour, lard, peanut butter, potatoes, rice, rolled wheat.

New foods are introduced frequently. This year for example, thousands of children in the North, East and West will get a chance to enjoy that traditional Southern dish—corn grits.

Schools in Maine, Massachusetts, Pennsylvania, Kansas, California, Oregon, and Washington, as well as Guam and American Samoa have accepted an offer to try out enriched corn grits in school lunches. If the children like the grits, more will be purchased and new outlets will be created for this corn product.

Last year, bulgur was introduced in school lunchrooms in 22 States. Ninety-eight percent of the schools rated bulgur—which is a dried cracked wheat product—as highly acceptable, and said they would serve it regularly. Children and school lunch managers liked the bulgur especially in meatloaf, hamburger and in baked foods to which it gave a nutty flavor. Managers reported that the more it was served the more its popularity increased.

In its 17 years of operation, the National School Lunch Program has introduced a wide variety in good foods to children. Children in the Midwest have learned to enjoy Southern sweet potatoes in school lunches, while school children in the Southeast now enjoy lunches containing purple plums from the Northwest. Canned grapefruit sections have become popular in areas where many children have never tasted grapefruit before they had it in their school lunches. And children in some California schools have asked that corn bread, new to them, be served as a weekly feature.

By getting to know many different foods, it is hoped the children will gain the knowledge they need for selecting nutritious, well-balanced meals for themselves all through their lives. And as the children get to know and enjoy these foods, the markets for these agricultural products will increase.

However, the children still rate the most familiar foods as favorites. In 1962 when school lunch managers made a survey of favorites among all the foods served, locally purchased as well as donated, the winners were hamburgers, fried chicken, turkey, spaghetti, hot dogs, over-sized sandwiches and anything on a long roll.

To make Federal purchases of foods specifically for the National School Lunch Program each year, the Food Distribution Division of AMS studies State reports on the foods the children need most and like best. They also consider supply information from marketing specialists and price information from the market news system. After this information is digested, AMS is ready to write specifications.

The specifications include standards for flavor, texture, quality and wholesomeness, recommended by AMS commodity divisions and food specialists from the Agricultural Research Service.

Before the foods are shipped to the States, the USDA sends inspectors to the plant of the seller to make sure grade and quality match contract terms. An inspector is also responsible for checking the loading of each car or truck.

Food donated by the Government through its surplus removal and price support program is also subjected to the same inspection for quality and wholesomeness as are the foods specially purchased for the program.

The same care used by the Government in purchasing food is also exercised by the school lunch manager. The supply and price information that the Food Distribution Division considers in Washington is also available to her. Many large school lunch operations also write specifications before they shop for food. And, in these days, much of the food bought by the manager—the same foods available to all consumers—has been graded through the AMS voluntary inspection system, requested and paid for by the processors.

With a variety of these good quality foods, lunch managers in 68,000 schools across the country can do their part in "safeguarding the health and well-being of our Nation's children."

Better Food at Better Prices-- The Aim of Marketing Research



You can't go whizzing around the country with a shopping basket to buy the food you need for your family. With few exceptions, you must depend on that food being funneled from farms throughout the country to retail outlets in your area.

That funneling process, which includes every step that farm products go through after they are produced until you buy them, is known as our marketing system.

The marketing system in the United States is generally regarded as the most efficient in the world, and it takes money and people to keep it that way. At present, twice as much money is spent on marketing food and other farm products after they leave the farm than is spent in producing that food, and twice as many people are employed in the various aspects of marketing than on the farm.

This is what it takes to turn a steer into a steak, peanuts into peanut butter, and ham, peas, and potatoes into a frozen dinner, and to get these products where you can buy them conveniently.

But efficient as our marketing sys-

tem is, no system is perfect—and that's where marketing research enters the picture.

Simply stated, the broad aim of the research program of the Agricultural Marketing Service of the U.S. Department of Agriculture is to aid in continually developing new and better ways to handle and transport agricultural products and to better maintain their quality until they reach your dinner table. This combined effort gives you a two-fold benefit: Food of better quality is made available to you and the increased efficiency of marketing practices helps hold down the price you pay for that food.

The role of marketing research as an aid to our marketing system is sometimes intangible and may not be readily apparent to you. But it is an important one, nevertheless.

Take the carrots you buy today in polyethylene bags. Not too many years ago, you bought carrots in bunches with the tops on, and when you got home you usually wrenched off the tops and threw them away. But you paid for transporting those tops from wherever the carrots were grown to your store.

With the bagged carrots, not only are transportation and handling costs reduced, but you've probably noticed that the bags reduce loss of moisture and the carrots remain in better condition during transit, in the store, and in your home.

The eggs you take home from the

store today have fewer blood spots among them than they did a few years ago. One reason for this is an electronic blood spot detector, which has been found 90 percent more accurate than the visual candling method. The instrument not only has a better record of spotting and rejecting eggs with blood spots, but also speeds up grading line production.

You are probably not overly concerned with the way food products are loaded on a truck or freight car, so long as they get to your store in good condition. But the loading patterns can be important to you.

When more efficient loading methods are used, a truck or freight car can carry more in the same space, and transportation costs are held down. In addition, proper loading patterns are vital to the proper circulation of air or refrigeration in the truck or freight car, and can reduce spoilage during transit.

Even the layout of the store in which you buy your food, and the work methods used there, can be important to you. More efficient layouts are designed for these stores, and better work methods are recommended for those who work in them. The same holds true for many new wholesale food markets sprouting up around the country, even though you probably never see them. The economies in handling, storing, receiving, and distributing food products through such modernized and efficient facilities are

reflected in the prices you pay for your food.

Should food be packaged at the retail store or by the wholesaler or processor, or even the farmer? It could make a lot of difference to you. The most effective and least costly system for each different packaged product you use is constantly under study, and this study often results in a better product for you at a better price.

New shipping containers and packages are now in use for many fruits and vegetables. In addition to protecting quality and preventing damage to the food, these have resulted in more efficient shipping and handling practices.

Aging is a natural process for all fresh produce, even after it is harvested, but it becomes undesirable when it results in the soft, overripe product which you will not want to buy. To reduce this hazard, methods of chilling produce soon after harvest have been developed, to slow down the ripening and aging of fresh fruits and vegetables and to reduce the growth of decay organisms. Specific cooling temperatures and treatments must be developed for each commodity.

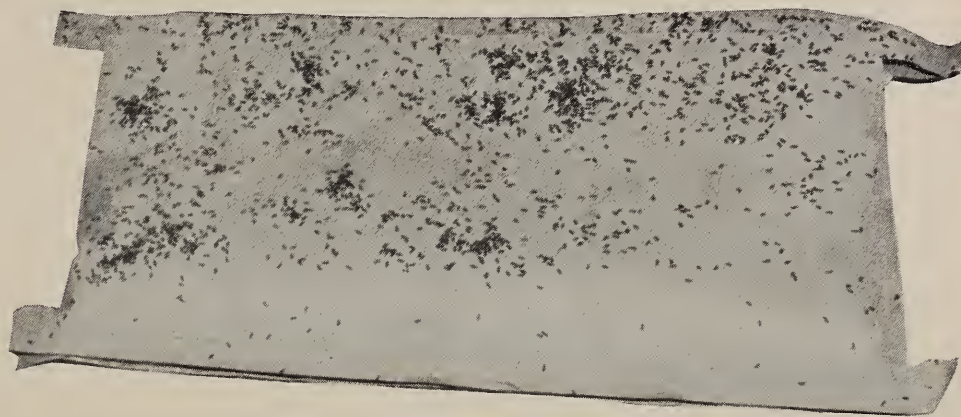
The packaging materials around the food you buy weren't just selected at random. Proper ventilation is often

necessary because gases given off by the produce may build up and prove harmful to quality. Packaging is selected only after study of respiration rates of different commodities, temperature and humidity requirements, the kind of wrapping which will give the most effective covering, and whether, or how many, openings are required in the package to permit the proper ventilation.

There was a time when some fresh fruit and vegetables were available to you only for short periods of time during the harvest season. Now many of them, through storage in controlled atmosphere facilities, are displayed in

stores throughout the country virtually all year long. By increasing or decreasing the amount of carbon dioxide, oxygen, and other gases present in the storage atmosphere, operators of these facilities increase the marketable life and properly regulate the respiration of many commodities.

Heat treatments, such as exposing the produce to hot water or hot air, are also being developed to reduce postharvest decay in some commodities. Other commodities respond best to chemical treatment. These treatments, of course, must be precisely controlled, and charts and tables are worked out by scientists in many fields



Above, a new insect-proof, multiwall paper bag which may be among the more important developments in the 1960's for controlling insects that attack packaged food and feed products in the home, on the farm and in commercial chan-

nels. Below a truck housing the facilities used to reduce food spoilage with atomic energy. The treatment of perishable foods with light doses helps to reduce spoilage before foods reach consumers.





Controlled storage atmosphere in the piggyback-trailer above virtually puts fruits and vegetables to sleep to delay ripening and, together with low temperatures, often controls spoilage organisms that attack the produce.

to aid the food industry in getting a better product to you.

Insect infestation is often fought off, long before you see a product, with proper chemical treatment and sanitation. Bags and packages have also been developed which provide double protection for your food—against insects boring through the walls of the package and against insects squeezing through stitching holes or imperfect seals.

Instruments and machines are also used to protect you from internal defects in food products. Some of these instruments "see" through the food and sort it automatically, without damage to the food. Other instruments help in-

spectors and graders accurately measure quality in food products. In addition to weeding out items of poorer quality, these instruments provide better incentive to producers to aim for high quality.

With the many convenience foods added to the thousands of items available to you at your food store, you can now buy food that can be made into a meal in minutes—a meal that used to take you perhaps hours to prepare.

The food abundance of this Nation would do neither the farmer nor the consumer much good if it were not for the intricate marketing system that functions between the farm gate and

the dinner table. And it is the role of marketing research, by government and by industry, to make that marketing system continue to improve.

It has been estimated that the produce from one out of every five acres growing fruits and vegetables is lost through waste and spoilage after harvest. To reduce this tremendous waste, and to insure better quality in the food products which do reach you, marketing research will continue to seek new and better methods of food handling and preservation.

So forget the shopping-basket tour of the Nation to buy the food you need. The marketing system is doing the work for you.

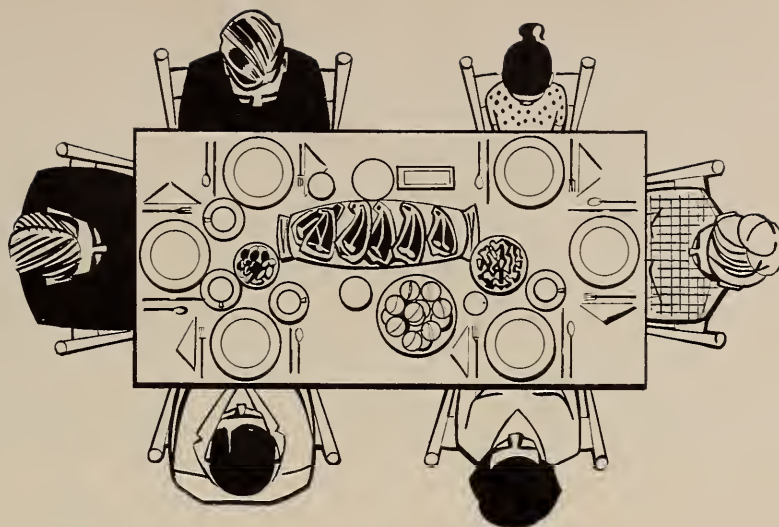


The harvest-fresh quality of fresh fruits and vegetables is often lost during transit to market. A growing amount of this loss has been traced to overloading of railcars and "piggyback" trailers, resulting in too many loads packed so solidly that refrigeration does not reach the produce. The load at left was properly cooled.



Plentiful Foods and You

By Joyce S. Short



The peak of quality, flavorful perfection, menu versatility, good value—that's what you, as a consumer, like to find in the market place. And that's just what plentiful foods provide.

The Plentiful Foods Program suggests new ways in which you can use foods temporarily or seasonally abundant, make them more exciting and more appetizing to your family. It may help you introduce new foods into your family's diet for greater variety. This, in turn, can mean that your family is getting more nutrition at less cost than it would otherwise.

A "plentiful food" could be called a gift of nature, for as the farmer strives to produce the best product in quantity that will meet normal market demands and provide him with a good return—conditions may be so favorable that a king-sized crop results. Or the farmer's product may grow ready for market ahead of schedule or behind schedule, because of unusual growing conditions. Any of these happenings can cause harvests to pile up and normal marketing channels to become clogged. It takes a lot of teamwork by the entire food industry to whet your appetites and thus stimulate increased consumption, so that the abundance will not become bogged down at any point in the vast food distribution industry.

Stimulating you to buy these bounties of food so they will move through normal trade channels in orderly fashion is of utmost importance.

This is where the Agricultural Marketing Service of the U.S. Department of Agriculture enters the picture. It coordinates a network of endeavors

by producers, processors, distributors, mass media, and local and State officials to tell food retailers, the food service industry and the individual consumer that a specific commodity needs increased marketing attention.

Frequently, the Plentiful Foods Program helps sell a crop of fruits or vegetables that would otherwise rot in the field because the grower couldn't sell them for as much as it would cost him to harvest them. It can help keep a grower of perishable commodities in business for another year—when you may need what he has to produce—instead of alternating between a feast at such low prices as to drive growers out of business, and the "famine" of low production a year or two later with high prices to the consumer. That's what we call orderly marketing—dependable supplies for you to consume, without violent swings between high and low prices, from year to year.

The simplest definition of the AMS Plentiful Foods Program is "orderly marketing," as accomplished through time-honored practices of promotion, advertising, merchandising and publicity, in full cooperation with private enterprise. Private enterprise in this case is America's great food distribution industry—the producers, processors, wholesalers, retailers, and the Nation's information media. In total application, it involves the efforts of related industries, too, such as the manufacturers of paper, glass, and metal food containers; civic organizations; advertising agencies; commercial art studios; merchandisers and public relations people.

It is not by accident, for example,

that the food section of your newspaper carries a full page article—complete with recipes and pictures—about a particular plentiful food.

Nor is it coincidence that radio and television stations carry spot announcements and other features about plentiful foods; or that regionalized articles by Extension consumer marketing and home agents carry interesting and appealing ways of using plentiful foods. These are the results of cooperative endeavor between government and private enterprise to help move particular food abundances.

The cost of the Plentiful Foods Program in the 1965 budget is less than \$1 for every \$300 spent by the U.S. government in buying perishable foods, or diverting them to other uses. Thus, at a relatively low cost, it is calling food values to your attention. The result, you and millions of other consumers buy more of these food abundances through the normal channels of trade—and fewer of your tax dollars have to be spent to take them off the market and find other outlets for them.

It is a program where everyone gains and no one loses, and one which functions within the established framework and pattern of free enterprise.

If, however, there is a *big* winner in the Plentiful Foods Program, it is you, the consumer. Your rewards are reaped when your appetite has become so whetted that you find yourself purchasing the promoted foods when they are abundantly displayed—a mighty good buy.

(The author is a Home Economist for the Plentiful Foods Program of the Food Distribution Division, AMS.)



Instruments-- Consumer's Best Friend in Assuring Better-Quality Food

Dinosaur eggs discovered frozen in the snow by explorers have more in common with the turkey in your freezer than their low temperature. Natural radiation given off by the prehistoric lizard's eggs can be measured by scientists to estimate when the eggs were laid. A somewhat different kind of harmless, natural radiation is given off by the turkey in your freezer. Scientists can measure this, too, to estimate the proportion of fat to lean meat—a

potentially valuable tool in giving the consumer the kind of product she wants, say research people in the Agricultural Marketing Service of the U.S. Department of Agriculture.

The same technique can also be used with a roast of beef or pork, whether fresh or frozen. The radiation measurements indicate the qualities consumers want: an ideal proportion of fat for flavor and tenderness, and of leanness to avoid wasted fat.

Selection of meat by a radiation counter is still a long way from commercial application, but a number of other techniques and instruments are almost as near practical use as the cars on the drawing boards at Detroit. These procedures and devices are designed by AMS researchers to perform such seemingly human judgments as the determination of color, ripeness, and other quality factors in fresh fruits, vegetables, and eggs. The principal advantage of instruments is their freedom from subjective feelings and changes to which human judgments are subject from day to day. In addition they promote greater accuracy and speed in inspection tasks.

Some of these instruments are already serving consumers. One, the bloodspot detector used with eggs, provides greater quality control than human inspection of eggs. The device has brought about the mechanization of egg grading and packing plants to a greater extent than otherwise would have been possible. It uses an electric beam to automatically examine every

Mechanical thumb "feels" fruit, much as human thumb would; but gives exact measurement of fruit's ripeness, or firmness, in pounds; assuring safe transit.

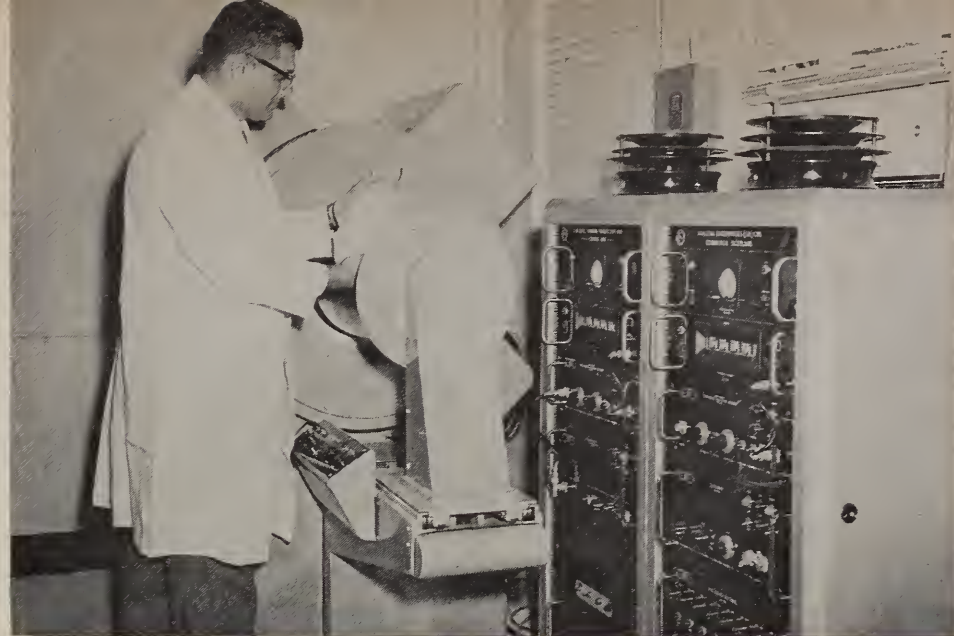


egg passing through the grading line, and separates eggs that are defective.

Another instrument that has recently come into use is the mechanical thumb. This rod-like metal instrument "feels" an apple, pear, or other commodity, as a human thumb would, but gives an exact measurement of a fruit's ripeness, or firmness, in pounds. The mechanical thumb makes it easier to determine when to ship apples to market so they will be in the top stage of ripeness when they reach the consumer.

Fruit tested with the mechanical thumb can be sold instead of discarded because the "thumb" leaves only a small, barely noticeable mark. In contrast, fruits tested with older techniques had to be discarded because they were cut, peeled, or otherwise injured when tested.

A substitute for man's visual sense is provided by another instrument, the colorimeter. Many tomato processing plants use this device to select tomatoes that will yield the color that consumers like best in juice and other strained tomato products. Heretofore, tomatoes were selected for such purposes on the basis of their external appearance. But with the tomato colorimeter the equally important internal color of the tomatoes is taken into account, for more accurate determination of the color that the product will have when processed.

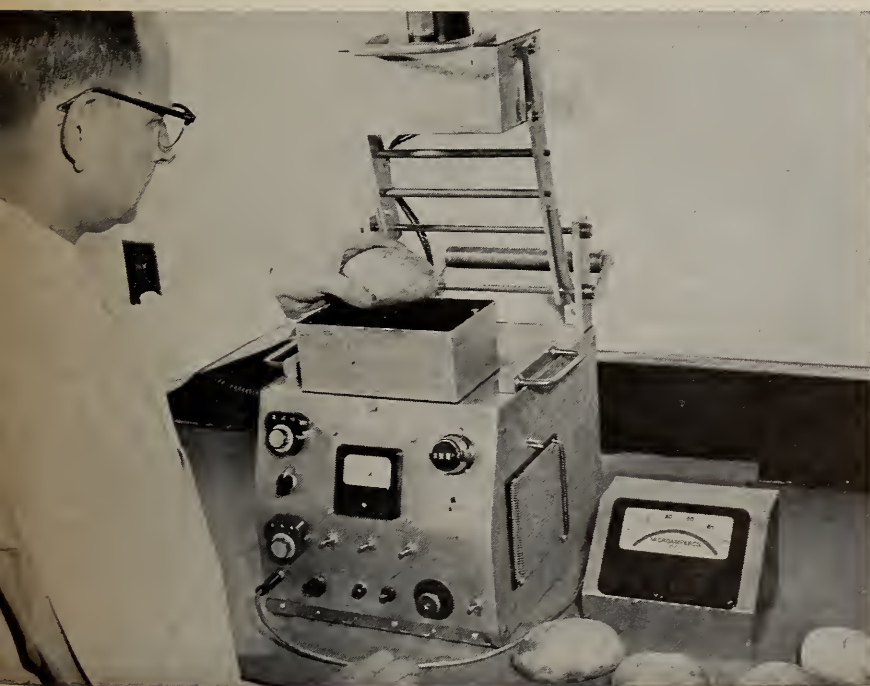


This radiation counter measures the lean and fat content in red meat and poultry by counting the natural radiation given off by meat, assuring more objectivity.

Internal appearance is easier to measure when instruments are used for apples, potatoes, and other commodities, too. The hortispect is an example of such an instrument. Its light beams can "see" inside a product without cutting it, the historical method for detection of internal defects. Potatoes with such hidden internal defects as hollow heart, apples with water core, and other defects of produce can be quickly and accurately determined and the produce removed from trade channels.

A prototype commercial model of the hortispect is now undergoing field tests. Apples can be automatically processed through the device, which rapidly sorts the fruit for ripeness and freedom from internal defects. Preliminary tests using potatoes with the same device have also been promising. Commercial application of the hortispect would make it possible for bulk quantities of produce to reach the consumer with virtually guaranteed freedom from defects.

The difference meter detects internal defects in a wide variety of fruits and vegetables without having to ruin the sample by cutting it open.



Minute radiation, present in all living things, and fat content are about to be counted in this beef round as it goes into the radiation counter.



OFFICIAL BUSINESS

The Consumer's Role in Milk Marketing

The lady walked briskly to the front of the crowded hearing room, spread a sheaf of papers on the table beside the judgeliike gentlemen, and started to speak calmly, reasonably, and logically of nutritional needs, prices, and problems of population explosion.

She was, she said, a representative of a consumer group. And she was participating in a public hearing that is an essential ingredient in the system of Federally regulated milk marketing that was worked out in the 1930's, and modified and improved over the 30 years since. Such regulations are voluntary, put in effect only if they have been approved by dairy farmers supplying a market.

The Federal milk marketing order system, set up by the Agricultural Marketing Agreements Act, gives the Department of Agriculture the responsibility for making decisions as to minimum prices milk dealers must pay farmers for milk. But it does this by prescribing a very careful route to be followed—based on the “town meeting” type of public hearing, to which all interested parties are invited, and in which all are given opportunity to have their say. The law makes it clear that decisions are to be made on the basis of facts presented at the hearings.

The milk producer, the milk dealer, and the milk consumer have much in common, of course. Each is interested in the other. Each needs the other. And each needs a continuing, steady flow of good, wholesome milk to market.

But, as to the value of the milk, they are basically opposed. The producer would like best to have the highest possible price. The consumer and the dealer would like best the lowest possible price. But both producer and consumer realize, of course, the irony of the extremes. If the prices to producers were too high, consumers could not afford much milk. And the high prices would encourage extra productions for which there was no market.

On the other side, if prices to producers were to drop to extremely low levels, it might be fine for consumers—for a while.

They could afford plenty of milk. But the supply would soon decline as some producers—losing money—sold their cows, and shifted into some line of work less demanding and more profitable than dairy farming.

This shortage would soon result in higher prices, and then increased marketings, followed by price declines again. True, supply and demand would constantly bring about adjustment in price, but too severe price changes would hurt both producers and consumers.

Or the consumer representative may be concerned more—consumers usually are—with high quality milk, and its ready availability, rather than with price alone. In an era of increased automation in farming, the Federal milk order program has helped assure both quality and constancy. The assurance of stability in minimum prices for his milk has enabled the dairy farmer to undertake the investment in equipment which makes it possible for him to meet today's stringent sanitary requirements for fluid milk. The price stability has justified his investment; the consequence has come around the cycle, to give the consumer the assurance of a readily available, high-quality supply of milk.

Both producers and consumers know that the decisions as to price—and other decisions of greater complexity, like methods of determining prices, and supplies, proper charges, seasonal patterns of payment, and the like—are decisions that need to be worked out in the best interests of all concerned: the producer, the consumer, and the middleman, the milk distributor.

In these days, the effective route to “work out” those interests has been found in the opportunity offered by the public hearings held periodically

by USDA's Agricultural Marketing Service, as adjustments are considered in the operation of the various Federal milk marketing orders.

In many milk marketing areas, representatives of the consumer have come to be regular—and respected—participants in the making of decisions on the milk orders.

In the New York-New Jersey milk marketing area, for example, the Milk Marketing Administrator's office has an effective consumer relations program. Principally responsible for its operation is Mrs. Eugenia De Pasquale, who has been with MMA for the past 24 years.

One of its chief functions is educational, keeping consumers informed on price changes, the reasons for them and similar developments of consumer interest. Or consumer and producer groups may be brought together to discuss issues of mutual concern.

In Hartford, public hearings are distinguished by the impressive presentations of Connecticut consumer representatives. Veteran economists of New England's milk marketing pay both tribute—and, the supreme compliment, close attention—to the well-assembled, well-presented testimony of these spokesmen for the consumer.

Decisions on the marketing of fruits and vegetables under marketing agreements and orders, as with milk orders, take the consumer's interest into account. And, here again, the results of such consideration are significant to the consumer.

Last year, 45 marketing agreements and orders were in effect on fruits and vegetables, covering the marketing of more than one billion dollars' worth of these products annually.

And 82 milk orders are currently in effect. Last year, the orders regulated the handling of 52 billion pounds of milk, worth \$2¼ billion dollars—almost half of all the milk marketed in the country.